

The Resonator

Official Newsletter of The Fair Lawn (NJ) Amateur Radio Club

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July 2024

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Remember: Ham Radio Is a Contact Sport!

Field Day with FLARC • 2024

Preparations for Field Day began in the winter cold and culminated in the searing heat (and rain) of summer. This year a slightly different approach was taken. Rather than an overall Field Day Chair we had a number of separate committees, each with its own Chair, although coordination and overall direction was handled by Noel W2MSA, though sadly Noel could not be there for the event itself. These committees were:

Station Captains

SSB

Van W2DLT (20/75M SSB) Chris KE2NJ (40M SSB)

CW

Steve WI2W (40 CW) Ken W2SCT (20/80M CW)

Free Station

Dave WO2X (6M FT8)

GOTA Station

Jerry KE2CJU (Captain) Brian KD2KLN (Co-Captain)

Antenna Committee

Steve WI2W
Dave WO2X
Mike KD2YEW
Jim N2JLF
Jim W2JC

IT Committee

Dave WO2X Jim W2JC

Power Management

Mike KD2YEW Jim N2JLF Steve WA2BYX

Publicity

Nomar NP4H Jim W2JC Brian N2BTD

Food Committee

Skip KD2BRV Nomar NP4H Judith KC2LTM Jerry KE2CJU

General Help

Jim W2KNG (Manager) Jeremy K2GRI Robert KD2SOG Chris KE2NJ Brian N2BTD Dave K2ZC Fred W2ABE KC2ORX Robert

Bonus Points Manager Jim W2JC

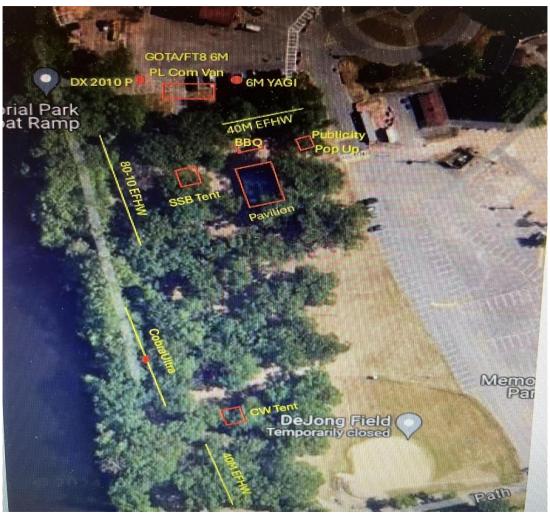
Once again Memorial Park was the site of our Field Day. The Club had previously purchased an additional tent (no longer needing to rely on the Ridgewood OEM tent) so we had two tents set up, one for SSB and one for CW. Each tent was separated at opposite ends of the Field Day site. Our GOTA station was set up in the Pavillion. The Pompton Lakes CERT generously provided their van which was used for a WinLink station.

The Tuesday before Field Day saw a number of

members coming to the Clubhouse to bring Field Day equipment up from the basement and get it staged ready for transport to Memorial Park. Friday members of the Antenna Committee and General Help Committee began the task of putting the antennas up in the trees, although the job was not fully completed until Saturday morning. Steve WI2W amazed everyone with his sharp shooting ability with the air-powered launcher, although everyone was careful not to stand on the wrong side of the trajectory as Sharpshooter Steve aimed for the heavens. Eventually all the wire antennas were up in time for the start of Field Day operation. SWR however proved less than friendly with some antennas requiring in the field adjustments, but in a sense isn't that what Field Day is all about? Dave WO2W assembled the Club's six meter beam which was located just outside the SSB tent.

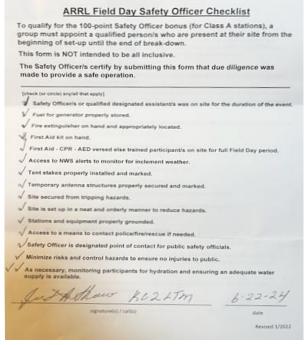
Saturday morning began with moving all the equipment from the Clubhouse to Memorial Park.

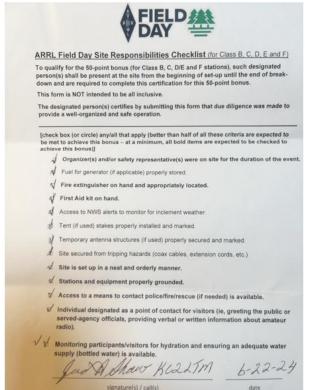
That's when the fun really began with unloading



equipment, assembling the tents, getting the power generators operational and of course setting up the stations. By lunchtime pizza was a welcome respite.

Judith KC2LTM was ever vigilant as usual as Safety Officer making sure the site was safe and all ARRL safety guidelines were met.





continued through the day and into the evening. As dinner time rolled around the Food Committee did an excellent job with hamburgers and hot dogs, as well as other savory treats, but just as the assembled crew was getting ready for much needed nourishment the heavens open up with a torrential downpour, along with some local thunder and lightning.

The crew huddled in the pavilion safe from the rain, but more importantly the tents performed admirably and the radio equipment was kept dry and operational. The antennas swayed in the heavy winds, but did not break.

After dinner and after the storm had passed operations resumed. A few hardy souls manned the overnight shift. Dawn welcomed some dreary but satisfied operators and the return of those members who had chosen a warm bed rather than a soggy tent. A loaded bag of bagels completed the morning scene. Good spirits remained the order of the day. Later in the morning the process of packing up started; but even as some antennas began to come down, operation continued until the very end. Because a local Girl Scout troop had reserved the pavilion beginning at noon, we had to be gone by then.

During a hot and steamy late morning the remaining members took the last antennas down, dissembled the tents, loaded everything into trucks, vans and cars and returned all Field Day paraphernalia back to the clubhouse. FLARC, ever the good citizen, left Memorial Park clean — with all trash and recyclables properly disposed and the site returned to the state in which it was before Field Day.

Later that afternoon a few members took the time back at the clubhouse to lay the tent fabrics open and have them bake in the parking lot under a blazing sun to make sure they were totally dry before storage.

During the week that followed all the equipment was once again returned to the storage closets in the basement, ready for Field Day 2025.

FLARC had a good showing, and although Field Day is

not a "contest" (per the ARRL) it is still nice to put points on the board, so to speak

Score - 1,804 Points						
Contest	: FD					
Band	Mode	QS0s	Pts			
3.5	CW	14	28			
3.5	LSB	36	36			
7	CW	213	426			
7	LSB	138	138			
14	CW	104	208			
14	USB	41	41			
21	USB	1	1			
50	FT8	12	24			
Total	Both	559	902			
Score:	1,804					
1 Mult	= 1.0	Q's				

Some lessons to be learned might be that while there is a hard cord Field Day group among FLARC members, ensuring a successful event, more member participation would be welcome.

Field Day is a premier event, the operating highlight of the year. Those not participating are truly missing out on something special. Field Day is not necessarily an all or nothing proposition. If a member is not able to commit to the entire weekend, or the pre-event preparation, a helping hand for even an hour or two would be welcome.

Even more, sitting down and operating for just a little while is super fun.

Another lesson to be learned is that while the separate committee structure will always be part of any Field Day, an overall Field Day "Comandante" on the ground during the event might have made things run a bit smoother.

Finally, Field Day does not end when the radios go silent. Much work is left to be done. Packing up and bringing everything home is as much a part of Field Day as setting up and operating. We should keep all that in mind for next year.

Field Day 2024 has now come and gone. However, for

those who did participate it is a fond memory with maybe a less than fond memory added in; but that is part of Field Day as well... otherwise what fun would it be?

What is Field Day without torrential rain, what is Field Day without an antenna refusing to tune up, without bugs and mosquitoes; but also what is Field Day without camaraderie, lasting friendships, laughter and a sense of accomplishment?

Field Day is about all those things.

• Reported by Jim Jalil W2KNG

[Note: the point score shown at left is only the contact points – does not include any bonus points we got.]



Welcome sign as seen from parking lot and pool.



PR Table with intro videos



"Right over that branch up there..."







Our youngest op...



Steve WI2W operating CW



Van W2DLT on SSB



Our public site, with town pool in background





Antennas everywhere!



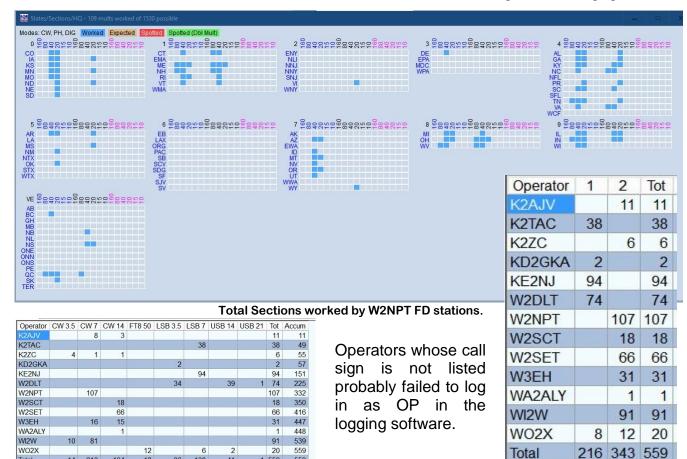


Spacious and airy operating conditions!



The club's new tent

The networking team "recharging"



Field Day with Noel W2MSA

Here's my Field Day report.

Although I couldn't participate in Field Day with FLARC this year, I was able to get in a few hours in throughout the weekend during our family camping trip in upstate NY.

Thankfully my tent held up pretty good during the two quick rain storms that came through our area.

My portable station was very compact still having everything I needed for a complete station.

I ran as W2MSA 1B ENY, LP, unassisted, with my Yaesu FT-891 @50w, CW/SSB, 20ah Bioenno battery box, 20/40m linked dipole up in the trees, 50' of RG8x and my mini laptop running N1MM+ for logging. I was able to make 100 casual contacts for the log in a total of five hours throughout the weekend and I had a really good time.

It was incredible hearing stations running 6A, 8A, 10A then I heard a 13A station, but the highlight was when I made contact with the FLARC 40m SSB station operated by Chris KE2NJ.

Field Day is great when you keep it simple!

73, Noel W2MSA







A happy camper, portable op and Field Day op!

A nice, portable, compact Field Day "rig in a tent"



Field Day Musings 2024

Well, another Field Day weekend is "in the can," and we all have our thoughts about the experience. For me, it was one away from the FLARC festivities, due to the excessive heat, and the fact that I can no longer participate from the field, due to the challenges of age.

My participation was from home, running 100 Watts to a homemade 40 meter delta loop, made into an all band antenna via balanced transmission line and with help from an ATU. I operated CW only, on 15, 20, 40, and 80 meters. I listened several times on 10 meters, but heard not a peep from anyone, anywhere. (What's happened to 10 meters lately)?

Propagation was less than stellar on Saturday, but things improved on Sunday. 40 and 20 provided most of the contacts, but 15 and 80 were in fair shape; 15 in the afternoon, and 80 at night and early Sunday morning. All in all, I made 358 contacts, somewhat less than last year, with a final score of 1482 points, including 50 bonus points for sending in my log electronically. These points will be aggregated to the FLARC club totals.

During and after Field Day, there was a lively discussion on the CW Operators Club email group. For one thing, several posters revealed that they had once been local residents who had operated with the legendary Englewood Amateur Radio Association's Field Days back in the 1970s. I was on several of those Field Days too, and so was Jim W2JC {then W2BVE}.

The EARA was famous for piling up as many transmitters as possible for their Field Day operation. The largest of these efforts was the year that they operated in 22A Class (22 transmitters)! Truly impressive, if perhaps a bit excessive, though.

I remember that Field Day, and it has been the standard of comparison to all the other Field Days I've participated in since.



Field Day Musings 2024, con't

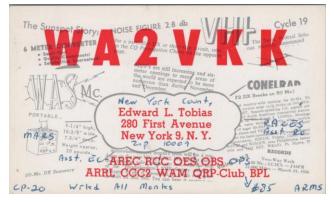
The CW Ops members who are EARA alumni besides PVRC Field Day "Mantra" me are:

K1DJ (ex-WB2LTW), now in Massachusetts

K2PI (ex-WB2PRU), now in Virginia

KR3E (ex-WA2VKK), now in Florida

KR3E said that though he wasn't living in Bergen County at the time, he was driven to the Englewood Field Day by his dad, from their apartment QTH in lower Manhattan.



WA2VKK QSL, 1964 (Now KR3E)

The most ambitious Field Day Stations I worked this year were:

> W3AO (MDC) 13A W5RRR (STX) 12F 10A KK5W (STX) 9A W2MMD (SNJ), W4DW (NC), and W4IY (VA) K4TS (VA), W8QLY (OH), and W9NE (IL) 8A

On the same CW Ops email group Field Day thread were comments by Frank W3LPL, who described the W3AO Field Day effort. Frank is a regular reader of the FLARC Resonator, and I had a brief email exchange with him after reading his posts. W3AO is licensed to the National Press Club Radio Club, but the planning was by a contingent of members of the Potomac Valley Radio Club (PVRC). PVRC is one of the most well known and successful contest clubs in the country. When they get involved in Field Day, you can bet they're going to make it a serious effort!

Frank posted details of their "mantra" for a successful Field Day operation, with a map of the Field Day site layout. See below for details....

- If you're not running, you're losing
- ➤ If you're not simultaneously operating on 40 CW, 40 SSB, 20 CW and 20 SSB, you're losing
- ➤ If you don't have world class FT4/FT8 operators and station, you're losing
- If you don't have an excellent, committed GOTA coach and station, you're losing

Antennas used: All are within a 1,000 foot diameter circle using nine 48 foot military AB-577 masts. All antennas on the same band are oriented end-toend, broadside to the west. GOTA antenna was a triband Yagi.

Antenna list:

- (4) 80 meter dipoles (CW, SSB, digital, and GOTA)
- (4) 40 meter dipoles (CW, SSB, digital, and GOTA)
- (1) 3-element triband Yagi for 20, 15, and 10 for GOTA)
- (3) 3-element 20 meter monoband Yagis (CW, SSB, digital)
- (3) 3-element 15 meter monoband Yagis (CW, SSB, digital)
- (1) 3-element 10 meter monoband Yagi, shared between modes
- (1) 5-element 6 meter Yagi
- (1) 11-element 2 meter Yagi

Other Observations

We only allow radios proven to have insignificant transmitted phase noise and insignificant receiver phase noise. We use mostly Elecraft K3s and Yaesu Most low priced, low performance FTdx5000s. radios are not allowed on site, especially very noisy Icom IC-7300s. We install W3NQN bandpass filters on every transceiver.

57% of their points were made by 4 stations:

20 CW, 40 CW, Digital #1 (no band specified), and GOTA.

Preliminary QSOs = 10,315.

Field Day Musings 2024, con't

Breakdown:

SSB: 4,622 CW: 3,528 Digital: 1,469 GOTA SSB: 695 GOTA CW: 1

Digital activity was significantly lower on 80 than 40, 20, and 15.

80 SSB activity was disappointing, too.

20 meter propagation was dead from 0800 to 1200 UTC [4 a.m. to 8 a.m.].

15 meter propagation was exceptionally good on Saturday, but marginally productive on Sunday.

10 and 6 meter propagation was disappointing, to say the least. [What happened to those Summer Solstice band openings, Frank???]

Frank's map of the Field Day Site layout follows.



Now, remember, these are results from a big name, highly successful contest club's efforts. Their results are exceptional, but obviously they do not represent the results of most Field Day stations, including our own — so don't think that we have to set-up exactly the same way, or with all those antennas. We have different priorities.

That said, smart, successful people learn from the successful strategies of others, which means that even a general interest club like FLARC can learn from the successful strategies of the PVRC's efforts at W3AO, and be guided by them.

Re-read the results and observations above, and see what improvements we could make for next year's Field Day effort. For example:

- > Use transceivers proven to have insignificant phase noise on transmit and receive.
- Concentrate on high point value modes (CW and digital).
- Run dipoles end-to end.
- Use high quality bandpass filters at every transceiver.
- Work on improving the GOTA station.
- Use propagation wisely, and exploit band openings on the higher bands when possible.
- Maximize your non-operating Bonus points.

All these will make for a more successful and enjoyable Field Day. And don't forget the hot dogs and burgers for lunch, the bagels for breakfast, or the pizza for dinner!

Until next year's Field Day and 73.

Fred KR2H



Stan Sanders KC2K — A Remembrance

- Fred Belghaus, KR2H

The year was 1964, and I was an 11th grader at Fair Lawn High School. I was also President of FLARC. Our club was located on the second floor of the Old Municipal Building on Gardiner Road and 11th Street, in the same location as the Senior Center today.



Old Municipal Building, Gardiner Road, 1949
Police cars are parked in front of a long removed grassy island

We shared the building with the Fair Lawn Hunting and Fishing Club, the Fair Lawn Reserve Police, and the Fair Lawn Players. There was also supposed to be a Fair Lawn Rocketry Club on the premises, but I never knew for certain where they met. Then, as now, the Players were our neighbors.

My first task after entering the front door was opening the mailbox on the back of the door, the mail slot of which was through the front door. Checking our mail, there was a QSL card inside from W2TIW, bearing a Bronx address. The card was from Stan Sanders, who had just moved to town, and who wrote that he was interested in joining the club.

We responded with an invitation to join us the next Friday evening at 7:00 for our informal meeting night. Sure enough, we met Stan the following week for the first time. To my knowledge, he has remained a member ever since.



1947 QSL card, when Stan was still living in the Bronx

Stan Sanders KC2K — A Remembrance, continued

Stan's license probably dated from late 1946. His station had been a homebrew transmitter, using a 6L6 Beam Power tube driving an 807, a popular Power Amplifier tube in those days, and running about 18 Watts. His receiver was a classic 1946 model of the Hammarlund HQ-129X, a receiver I knew well, since one of my ham uncles, W2VQD also had one. It was one of the better models sold in those days.



Hammarlund HQ-129X

Stan presented himself to us as a soft spoken, but friendly guy with a sense of humor. He was happy to now be living in the suburbs, and eager to start stringing wires for antennas at his home on 28th Street.

Shortly after this, Stan brought one of his new projects to the club. It was another homebrew CW transmitter. This one used an up to date design, having a 6146 final amplifier. It included an internal power supply, and was neatly built in an attractive steel gray hammertone cabinet. As a home-brewer myself, I was very impressed by the professionalism of Stan's workmanship, and I can visualize that transmitter in my mind's eye right now.

Here, I must break off somewhat. Although I've been an active FLARC member in recent years, I must confess that I left the club after graduating High School and during my years in college. The intervening years saw me building a career and having several other interests besides amateur radio. Having been away from the club for decades, I'm unable to give a complete and accurate account of Stan's activities during that period. If someone would like to fill us in, and send their additional info to the *Resonator*, please do so. Send email copies to Jim W2JC (Publisher) and Jim W2KNG, (Editor) using their email addresses on the club roster.

Speaking with others, though, a picture emerges of Stan being a valuable and loyal member of the club, and one who readily shared his knowledge with those needing technical assistance, especially beginners. Serving others is in the finest tradition of amateur radio, and a reputation for which anyone may be proud.

Professionally, Stan was partner in a successful wholesale candy distribution business. He served in the U.S. Navy as radio officer on airships, based at Lakehurst, New Jersey. He was a member of the Jewish War Veterans Post 651, Fair Lawn. ^[1] He also held a private pilot's license, a second hobby he enjoyed along with amateur radio.

Stan Sanders KC2K — A Remembrance, continued

I searched for a photo of Stan, and finally found one from an article about his activities with the Fair Lawn Jewish War Veterans Post.



Members of the Jewish War Veterans of Fair Lawn. From left, Arthur Wartenberg, Sid Schuster, Sheldon O. Schwartz, Jules Corn, Jack Albalah, Ed Rosenblatt, Jesse Rosenzweig, Sig Westerman, Howard Goldman, and Stanley Sanders. Tariq Zehawi/NorthJersey.com

https://www.northjersey.com/gcdn/-mm-/0225434abef99966d6e09e99f57499bd304c91e4/c=0-260-3750-2378/local/-media/2017/05/26/Bergen/NorthJersey/636313956558248482-052617-Fair-Lawn-MarchTZ16711.jpg

Stan is in the group picture of Post members. He is the man standing at extreme right. There is also a picture lower on the page showing a clipping from a 1953 newspaper where he is also mentioned.^[2]

I only wish I could show and tell you much more. Stan upgraded to Amateur Extra Class many years ago, trading his W2TIW call for KC2K, a call well known to us on the Near and Far Net, which meets every Monday evening at 8:00pm on the FLARC 2 meter repeater.

Stan passed away on Friday, June 21, 2024. He was 93 years old. There was a gravesite service held Monday, June 24th at Cedar Park Cemetery, Paramus. In attendance were FLARC members David Gotlib (KD2MOB), Treasurer; Paul Cornett (W2IP), former Chairman of the Technical Committee; and myself, KR2H, President.

A repast was offered at Kosher Nosh, Prospect Street, Glen Rock. At the repast, I met Stan's son, Glenn (WB2HUS), for the first time, offering my condolences.

To sum up Stan as I knew him, I can think of no better words than these:

He was a kind, gentle soul, who hurt no one, and who always helped those who asked for help.

I think that's an epitaph fitting for the best of us, and that's what Stan was. R.I.P.,

Fred KR2H • President, FLARC

NOTES:

[1] Yellen, Deena, "Jewish War Veterans Lead Fair Lawn Parade," The Record, May 26, 2017, updated May 27, 2017.

[2] Ibid. https://www.northjersey.com/story/news/local/2017/05/26/jewish-war-veterans-lead-memorial-day-parade/337479001/

Notable Hams

by Jim Jalil W2KNG

This column features notable hams both past and present. This month we will feature a man whose name may not be known to many, but who played a significant role in developing technology critical to the success of the Allies in WWII and whose primary invention is found in nearly every American kitchen. We are of course referring to Percy Spencer W1GBE, the inventor of the microwave oven.



Percy Spencer W1GBE

Percy Spencer (1894-1970) had an unfortunate childhood. His father died when he was still a baby. He was adopted by an uncle who became like a father to him, only to have his uncle die when Percy was only 7. Percy Spencer would go on to become a Senior Vice President of Raytheon, a member of its Board of Directors and the holder of over 300 patents. He was a renowned and respected engineer and scientist. What is intriguing about all this is that Percy Spencer never finished grammar school.

Sent to work in a factory at the age of 12, Percy Spencer seemed to be destined to a life quite different from the one that developed. Gifted with a curious mind, however, he developed an interest in the commercial application of electricity at a very young age and at a time few understood the technology. With not a little pluck and quite some ambition he and two friends offered to install an electrical system at a local paper mill once electrical power lines had reached the vicinity of the mill.

He had no experience and no training in electricity and, as he later recalled, he worked "by the seat of his pants." The installation was a success nevertheless; Percy became a self made electrician and, as a result, very much in demand.

After the sinking of the Titanic, newspaper accounts hailed the heroism of the "wireless" radio operators who stayed at their station transmitting distress calls until the very end. Fascinated by this and by radio communication in general Percy Spencer joined the Navy in 1912 and entered the then famous Navy Radio School.

In those days Navy radio operators were expected not only to send and receive Morse Code messages, but also maintain and repair the radio equipment on board a ship, so his training was technically comprehensive. Upon his discharge from the Navy, Percy was well prepared for a technical career in electronics.

His first position after he left the Navy was with the Wireless Specialty Apparatus Company in Boston. However, in 1925 Percy Spencer became the fifth employee to join the Raytheon Company — which, incidentally, had been formed by two MIT professors in 1922.

He would remain at Raytheon for the rest of his life. Once hired, he quickly justified the faith shown by two MIT professors in a grammar school drop out by developing the first gaseous rectifier tube — which made the common household radio affordable and able to be mass produced.

Percy Spencer was an accomplished CW operator when he left the Navy but it was not until 1935 that he received his ham radio license. He was given the call sign W1GBE, a call sign he would retain for the rest of his life. Unlike many ham radio stories, it was not ham radio that led to a career in electronics and engineering but rather it was the other way around. It was a career in electronics and engineering which led him to ham radio.

After the success of the gaseous rectifier tube,

Notable Hams, continued

Percy Spencer turned his attention to photoelectric vacuum tubes, paving the way for the television tube. However it would be the magnetron tube which would lead to his greatest success. The magnetron had been invented in the U.K. at the outset of WWII and was a key component of radar, a new technology which would prove invaluable to the Allies in the war.

The magnetron was a microwave generating tube allowing radar detection through microwaves — resulting in much improved distance and reliability over older inefficient and unreliable radar systems.

At first the magnetron was costly and difficult to manufacture. When the U.K. shared the technology with the United States it was hoped that a way could be found to mass produce the much needed tube. Raytheon was awarded the contract by the U.S. War Department and tasked with designing an efficient way build the device and then manufacturer it.

It fell to Percy Spencer to head the project. When Raytheon was awarded the contract, the U.K. method of manufacturing a magnetron tube could produce no more than 17 a day, a number which would have rendered radar almost useless in the war.

Percy Spencer quickly designed a process whereby 2,600 magnetrons could be produced each day. By the way, the magnetron project was such a military secret it was second in priority only to the Manhattan Project. Percy Spencer's success with the magnetron was so vital to the war effort that after the war the Navy awarded him the Distinguished Public Service Medal.

Percy Spencer was not finished with the magnetron when the war ended, however. Legend has it that in 1945, when working next to an active magnetron tube, a chocolate candy bar in his pocket melted even though he felt no heat.

He realized that it was microwave radiation which had melted the candy bar, not thermal heat. He then began experimenting with other food stuffs, including popcorn. Seeing the results, he constructed a metal box to retain and reflect the microwaves. The microwave oven was born.

Raytheon filed for a patent for the microwave oven, naming Percy Spencer as the inventor, on October 8, 1945. The first microwaves were very large and expensive and were designed for commercial kitchens. But as always, the technology developed and by the late 1960s the microwave oven hit the retail market. That market truly exploded in the 1970s and now microwave ovens are ubiquitous in American kitchens.

Percy Spencer died in 1970, revered and respected not only at Raytheon but among an entire generation of engineers and scientists. Although he had no formal education, Percy Spencer was inducted into the Institute of Radio Engineers, given a Fellowship in the American Academy of Arts and Sciences and awarded a Honorary Doctor of Science degree from the University of Massachusetts. He was the named inventor of over 300 patents. Raytheon has had several buildings named after him over the years.

Percy Spencer remained an active ham from the time he received his first license in 1935 until his death in 1970. He was an active member of the local Raytheon Ham Radio Club. After his passing the Raytheon Ham Radio Club in Marlborough, Massachusetts honored Percy Spencer in the most meaningful way a ham can be honored by his or her club. To this day the call sign of Raytheon-Malborough Ham Radio Club is W1GBE.

Percy Spencer was very much a self made man, a giant in the electronics industry and a man who most certainly left his mark in the world. Nevertheless, to us he was simply Percy W1GBE.

But having said that, it is true that the next time you pop something in the microwave to "nuke it," you can thank a fellow ham.

Percy Spencer ● W1GBE SK





The Clubhouse Is Open Three Fridays In July!!

Date	Clubhouse Status
July 5	OPEN
July 12	CLOSED – Business Meeting
	at Fair Lawn Senior Center
July 19	OPEN
July 26	OPEN



Pop-Up Tuesdays are now in-person at the club as well as in the Zoom-room.

The club will follow all borough COVID-19 requirements for these events.



The Fair Lawn Amateur Radio

Why is FLARC New Jersey's Most Exciting Radio Club?

Annual and Special Events



- Field Day
- Winter Field Day
- World Amateur Radio Day
- Portable Day
- Earth and Environmental Days
- Field Trips
- Club Exchanges

- Special Even
- **Public Service Activities**
- **Public Events**
- Ham fests and Auctions
- **Foxhunts**
- Contests
- Youth Activities and more

There Is Something Every Night At FLARC!

Monday: Near and Far Net

Tuesday: DMR Net and Open House at the clubhouse

Wednesday: ARES/RACES Net

Thursday: Tech Net

Friday: Open House at the clubhouse or Kawfee Tawk Speaker Series (Monthly via Zoom)

Weekends: Open House at the clubhouse, POTA and other station activations, Contests, Foxhunts

Special Interest Groups

- Portable Ops (POTA, SOTA, etc.)
- DX: Chase the rare ones
- Digital Voice: DMR and other modes
- FT8: Plus, other WSJTX modes
- Satellite: Also, for weather interests
- Monitoring: SWL and other listening
- Contesting
- **EMCOMM**
- Radio Direction Finding
- Raspberry pi, Arduino



Plus:

- A five-position operating station clubhouse
- An active repeater—W2NPT linked with NJ2BS. •
- New antennas on the roof
- Monthly VE testing

- An award-winning newsletter
- Monthly speaker programs
- Educational programs and activities
- Active in-person and social networking
- An extensive video education archive

That is Why FLARC Is the Most Exciting Club Around!

Come join us in-person or via Zoom for more activities, speakers, and projects!

www.fairlawnarc.org







Editor's Corner

A topic not often discussed among hams, and sadly sometimes not fully appreciated, is safety. There is nothing inherently unsafe about amateur radio of course, but as with all technology, modern and ancient, proper respect should always be given to apparatus that has the potential to cause harm.

With ham radio there are three main areas of safety awareness. The first is construction. When assembling any amateur radio related project the first, primary and over-arching concern should be safety. Few of us will ever assemble or mount towers, which should generally be left to professionals; but any antenna construction project raises safety concerns. Whether it is using an air pressure antenna launcher, a sling shot or any of the many other methods of getting wire or metal into the air, climbing a tree, getting on a ladder or even standing awkwardly, safety should always be the first priority. Antennas should never be placed anywhere near electrical power lines.

Building kits or home brew ham radio related equipment also always involves safety issues such as being careful of sharp edges, being respectful of power tools such as drills, avoid getting burned with a soldering iron or when firing up a piece of electronic equipment for testing understanding the potential lethal voltages involved. We should be ever alert and cautious. Safety glasses are just not recommended, they are essential.

The second area of safety awareness is the design of a ham radio station. Volumes have been written about proper grounding, lightening protection, electrical safety and RF protection. Our stations should be designed with all of those issues in mind.

There is a mountain of learning we can lean on, beginning with ARRL publications. As ham radio operators who have taken an exam before being licensed we are charged with the responsibility to have some level of technical understanding or at least curiosity, including as to these issues.

What is so wonderful about ham radio is the fraternity/sorority element among hams. There is a vast reservoir of experience any ham, particularly a

new ham, can call on — especially at a ham radio club such as our own FLARC. That experience and the wealth of knowledge involved are there for the asking.

The third area of safety awareness is the operation of a ham radio station, whether stationary or portable. At home every ham radio station should have a fire extinguisher designed for an electrical fire near, charged and at the ready. Stations and work benches should be neat and uncluttered, wires properly harnessed and anchored. Neatness counts not only for appearance and aesthetics but also for safety. When showing off our station to a non-ham, we may be called amateurs but our stations should look polished and professional and above all safe.

Portable operating comes with its own set of safety concerns. Safety should be the primary motivation when deciding on a portable set up, whether on a park bench, a folding table or even on a rock. Coax wire runs should be set up with safety as the first priority.

Most safety precautions are common sense. The problem isn't that being safe is complicated or unknowable. The problem is not that we don't know how to be safe; the problem is that we may not always take the time to be safe or have safety in the forefront of our minds. It should be.

Short cuts are like short circuits, they are never a good idea and never work.

Safety doesn't happen by accident. It is the product of premeditation, preparedness, awareness and common sense. Remember... safety first.

Jim Jalil W2KNG





W2NPT Fair Lawn ARC • Field Day 2024

Not everything at our public Field Day site was in tents... thanks to Fair Lawn Parks & Recreation, who sponsor our group on behalf of the town of FairLawn, NJ we also had the use of this nice pavilion. And it was VERY nice for the half hour on Saturday late afternoon when we had a torrential rain! Several 'rivers' of rainwater were flowing across the concrete platform, but we were dry.

2024 Dues Are Past Due

Dues for 2024 are over-due now. There are no changes to dues for the upcoming year. Renew now, and let us know what activities or features would make you more active with the club.

Please makes checks payable to: "Fair Lawn Amateur Radio Club" and send them to:

Fair Lawn ARC

– Attn: Treasurer
10-10 20th Street
Fair Lawn, NJ 07410

Please include a member application form with your \$25 check regardless of your member status.

It can be found near the back of this newsletter.



The Resonator Is Now Archived!

Ever wanted to search for something in *The Resonator*? Maybe a member profile. Perhaps a past Street Fair. Even who participated at Field Day in 2017.

Now you can. *The Resonator* has now been accepted as part of the Digital Library of Amateur Radio and Communications. DLARC is a project of the Internet Archive (the not-for-profit online library best known for *The Wayback Machine*.) DLARC is growing to be a massive online library of the past and present of ham radio and related communications. It is funded by a grant from Amateur Radio Digital Communications.

When you need to find something, go to: https://archive.org/details/flarc-resonator

You can use the search "text contents" field to do a full-text search on all issues or click "Date Published" to see them sorted by publication date.

You know our little newsletter is cool.

Now a lot more hams around the world will as well.

Get Direct With FLARC!

Here is a direct link to specific club info: just a click away!

http://apparel.FairLawnARC.org
http://auction.FairLawnARC.org
http://blog.FairLawnARC.org
http://calendar.FairLawnARC.org
http://events.FairLawnARC.org
http://exams.FairLawnARC.org
http://facebook.FairLawnARC.org
http://news.FairLawnARC.org
http://swap.FairLawnARC.org
http://swap.FairLawnARC.org
http://tech.FairLawnARC.org

https://groups.io/g/FairLawnARC



Online License Testing!

Are you looking to get your license or upgrade without leaving your home? All you need is a laptop computer with a video camera.

Please check out http://hamstudy.org/session/K2sab for session information.

If you have any questions, please contact me at k2sab@arrl.net

73.

Steven Boston K2SAB

The Club Fair Lawn ARC is the fastest growing ham club around, with five operating positions in a permanent clubhouse. Visitors and guests are always welcome. The club is open every Friday night, except when there is a Business Meeting scheduled, from NLT 6:30 PM. Business meetings are the first Friday of the month at 7:30PM.

2023 Officers, Committees and Assignments

2023 Officers, committee		
President	Fred Belghaus	KR2H
Vice President	Robert Marchini	KD2SOG
Treasurer	David Gotlib	КD2МОВ
Secretary	Jim Jalil	W2KNG
Trustee	Brian Cirulnick	KD2KLN
Trustee	Judith Shaw	KC2LTM
Trustee	Lowell "Van" VantSlot	W2DLT
Member Services Health & Welfare	Judith Shaw	KC2LTM
Marketing	Nomar Vizcarrondo Jim Cooper	NP4H W2JC
Program	[open]	
Video/YouTube	Thom Guida	W2NZ
Social Media	Brian Duddy Thom Guida Dave Marotti	N2BTD W2NZ NK2Q
Photographer	Giovanni Lucero Robert Marchini	K2GIO KD2SOG
Community Relations	Gene Ottenheimer Dave Gotlib	WO2W KD2MOB
Field Day • 2025	[open]	
Hamfest • 2024	Gene Ottenheimer	WO2W
Auction	Brian Cirulnick	KD2KLN
Activities Chair	Judith Shaw	KC2LTM
Education	Paul Brennan	N6FB
Youth Outreach	Robert Marchini	KD2SOG
Adult Outreach	Lowell "Van" VantSlot Jim Cooper	W2DLT W2JC
VE Testing Coordinator	Gene Ottenheimer	WO2W
Special Events	James Gallo	КВ2FМН
Contests	Lowell Vant Slot	W2DLT
FLARC Historian	Fred Belghaus	KR2H [W2AAB]
Webmaster	Jim Cooper	W2JC
Technical Chair	Dave deCoons	WO2X
EmComm RACES/ARES Director RACES/ARES Liaison	Jim Breheny Dave Gotlib Steve Wraga	N2JLF KD2MOB WA2BYX
Newsletter Editor	Jim Jalil	W2KNG
Newsletter Publisher	Jim Cooper	W2JC
Club Station Manager	Noel Pagan	W2MSA
Quartermaster	Fred Wawra	W2ABE
W2NPT Trustee	Jim Cooper	W2JC
NK2H Trustee	Ed Efchak	WX2R

President serves as ex officio to all committees

Want a Call Sign License Plate?

Amateur Radio (Ham operators) license plates may be purchased for a \$15 fee, for passenger vehicles, but not for commercial vehicles or motorcycles. (Applicants must be licensed by the Federal Communications Commission.)

Call MVC at 609.292.6500 or (toll free in NJ) 888.486.3339 to request an application.

The club has applications from time to time. If you would like an application, visit the "contact us" page, and we'll get one out to you.. or find the form and detailed instructions at:

https://www.state.nj.us/mvc/pdf/vehicles/SP-23.pdf



Letters: A New Addition to *The Resonator*

The editor has received a lot of nice notes, letters and comments about this newsletter and the club in general. We have not published them in the past but going forward we will at least try.

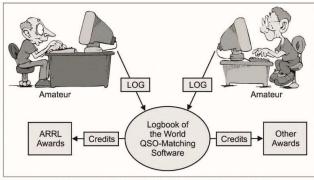
Here are the grounds rules:

- Please keep all comments as brief and succinct as possible.
- No personal attacks.
- No political rants.
- No comments promoting violence, racism, religious intolerance, vulgarity, obscenity, or other such discourteous behavior.
- The Editor reserves the right to exclude any comments that violate our guidelines and may subject the writer to further disciplinary action by the club.

A QSL card is the final courtesy of an amateur radio contact.

PAY YOUR DUES NOW!

https://en.wikipedia.org/wiki/QSL_card



Those who upload logs to Logbook of the World become eligible to redeem confirmation credits for awards. LoTW wants and needs *all* logs. Uploading is free, so send your logs today!

NOTE:

Following an apparently rather serious network intrusion at ARRL, the LotW system was restored on July 1st and in less than 6 days it was able to process the more than TEN MILLION log entries that had backlogged during the outage. At present, LotW is accepting and processing log updates in near "real time."

Follow FLARC ON THE WEB

Facebook: http://facebook.FairLawnARC.org

Twitter: @FairLawnARC

Youtube: http://youtube.FairLawnARC.org

Website: http://FairLawnARC.org

SIG Group Membership as of May 27, 2024

Here is an update on the roster of Special Interest Groups... many groups have increased in size during the last month. About 45% of all members have joined at least one group.

SIG Name	<u>Leader</u>	<u>#</u>
Contesting	W2DLT	14
Digital Voice		30
EmComm	N2JLF	13
Monitoring	WX2R	25
DX	W2JC	18
FT8	W2JC	22
Satellites	N2AAM	20
Portable Ops	W2MSA	48
Radio Astronomy	WX2R	4
Raspberry pi		7
Direction Finding		6
FLARC General		174

Sign up for a group... or ...

why not start one?

Contact webmaster@FairLawnARC.org
if you would like to start a new
Special Interest Group.

Vast Archive of FLARC Activities and Info

Members are reminded that we have a large archive of YouTube videos of our previous many years of Kawfee Tawk™ presentations, which cover many aspects of ham radio. Our mostly unsung hero club videographer, Thom W2NZ, has spent thousands of hours of his own time creating really professional quality videos of these 167 presentations. Visit our club YouTube page and you will see all of listed them on the main page, http://youtube.FairLawnARC.org

Another large and rather unused archive is that of our seven years of the club newsletter, The Resonator. They provide a nice historical record of the many activities of FLARC over the years, as well as lots of useful info about ham radio and electronics. The entire archive is at http://newsletters.FairLawnARC.org

And don't forget the FILES area of our groups.io website, where useful and important info is saved:

https://fairlawnarc.groups.io/g/main/files

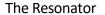
Renew Your ARRL Dues... Send Free Money to FLARC!

The ARRL has a great program to support affiliated clubs in that it sends part of your dues back to the club if you renew through the club.

So... when you get your ARRL renewal, send both your check and your renewal application to our trusty Treasurer, who will take care of getting your renewal to Newington and a fat check for \$5.00 back to FLARC.

Nothing can be simpler... you just have to remember!!

Print and use the form on page 33 of this issue of







Club Apparel — Get Them While They're RED!

Club apparel is always in vogue. Red is always "in" and your club friends all have them... you *want* a shirt or jacket for the next FLARC event! Great for Field Day!

Don't forget.... they're easy to order.
Go to <u>www.hamthreads.com</u>
or visit http://apparel.FairLawnARC.org

Check out the item selection that is posted on the FLARC website (with pictures and prices). Order the shirts or other items you want with either the regular FLARC logo or the still-cool 60th anniversary logo. Note: RED is the primary and preferred club standard shirt color.

And why not WEAR your nice red shirt when you come to the club, especially for meetings and events.



It's easy to spot FLARC members wearing their red club shirts!

Ham Radio Is Contagious And It Won't Make You Sick!!

2024 FLARC Net On The W2NPT Repeater:

Near and Far Net • Mondays at 8PM

W2NPT Repeater and EchoLink

Special Note: As non-profit, the IRS now requires that we disclose annually the use of paid lobbyists to our members and indicate approximately what percentage of their dues goes toward that. 0% of your dues payment will be used by the club to directly pay a lobbyist firm to lobby on behalf of all our members regarding pending legislation that impacts our hobby.



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BEQUEATHS AND DONATIONS

Planned gifts usually imply the family donation of amateur equipment to the club when someone has become a Silent Key. But it can be more. Club members might consider making a gift through a will or trust; gifts that help provide lifetime income to the club. Consult with your lawyer, estate planner or tax advisor if you feel such as gift is worthy.



This is YOUR club.... Be a part of it !!

About The Club

The Resonator is published monthly and is the official (and only) newsletter of The Fair Lawn Amateur Radio Club. FLARC was established in 1956 and has met continuously since inception. The club is sponsored by the Borough of Fair Lawn. The club meets every Friday, except when a Business Meeting is scheduled, at 6PM at the club station in The Fair Lawn Community Center, 10-10 20th Street, Fair Lawn, NJ. Business meetings are the first Friday of the month at 7:30 PM at the Fair Lawn Senior Center, and on Zoom.

Visitors **ARE ALWAYS** welcome at our meetings.

FLARC operates the W2NPT repeater (145.470- PL **167.9**) located high atop the Community Center. The analog repeater is open to all amateurs for use without restrictions.

The club has nearly two hundred paid members.

Dues are currently \$25 per year;

\$20 for new members.

For more information, please see our website, at http://membership.FairLawnARC.org

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FAIR LAWN'S COMMUNICATIONS CENTER!

With Our Antennas On The Roof!



Pop-Up Tuesday Happenings



Pop-Up Tuesday

Tuesdays at 19:00 ET

LIVE at the club!

Pop Up Tuesday was well attended on 6/11, with Dave WO2X testing his Flex remote station with his maestro, Steve WI2W building tuning stubs for Field Day — and others putting three of our stations on the air, mentoring for new hams and tech talk discussions being had and much more.

Noel Pagan W2MSA









FLARC June 22, 2023 VE Testing Results

With VE testing back on schedule, Gene **WO2W** reports the following results:

Name	Call	License Earned
Jason Olejarz	KE2DQO	Technician
Marc Hering	KD2JGK	General
Edward Diaz		General
Patrick Mullan	KB2TCE	Extra

Testing for next month will be at the Fair Lawn Recreation Center.

Eleven Special Interest Groups [SIGs] Already Formed: Any Others?

URGENT: We now have three SIGs [Digital Voice, Raspberry pi and Direction Finding] that do not have a moderator for the group – as shown on page 2. N2AAM has agreed to run the Satellite SIG.

If you have an interest in one or more of these topics and would like to see them active, please send an email to webmaster@FairLawnARC.org

A list of all of the current SIGs is shown on page 2.

Other possible groups, from the member survey, include:

- Radio Propagation
- Antennas and how they work
- Ham radio software
- Technical assistance to club members

Anyone interested in leading any of these groups...?

Please contact webmaster@FairLawnARC.org

Around the Shack

- Hal Kennedy N4GG

Facebook - A Ham Radio Resource, No Kidding

Yes, Facebook. The topic of Facebook comes up occasionally in my conversations with hams. While I'm not evangelical, I'm also not bashful about mentioning how Facebook has become a valuable resource for ham-related information. I encourage people to check it out.

There are *a lot* of hams active on Facebook. There are also many who are not, for a variety of reasons. Reasons I've heard include:

- ✓ I don't have the time.
- ✓ Isn't that for a younger crowd?
- ✓ I don't use social media.
- ✓ I tried it years ago, it's not for me.
- ✓ It's a security risk.
- ✓ It's probably difficult to learn.
- ✓ I'll be opening myself up to ridicule and trash-talk.
- ✓ Etc. Add your reason here.

The majority of concerns are unfounded. If you tried Facebook years ago and moved on; things have changed while you were away. Facebook has matured. It was where kids went to share gossip. That's over. Kids still do that, but they've moved from Facebook to other social media platforms. Kids now eschew Facebook. "That's for my parents."

There are two areas where Facebook provides useful ham-related information. The first is via interaction with companies and organizations. The second is via the dialog found in "groups."

Most ham-related companies and organizations have a presence on Facebook. Some no longer have a presence anywhere else. Hosting and maintaining a website is expensive; many small companies (not just ham radio companies) have shuttered their websites and reach their customers via Facebook. A company can post any information it wants there for free and in real time. As with personal posting, company postings are open to comment.

Useful dialog occurs between users of the products and the company, and between one user and another. Facebook is a two-way medium.

Here are a few of the companies/organizations I pay close attention to, with the number of followers each has in parenthesis. Begali Keys (2,700), Vibroplex (2,700), Yaesu (33,000), Ham Radio Outlet (20,000), the Grand Tour (195,000), GM (833,000), and the ARRL (98,000). The number of followers understates the amount of readership these organizations have. More people read the mail than "follow."

The second area where Facebook provides a wealth of information is in "groups." A group is simply a subject-specific place where participants can read the mail and join the conversation if they wish. Anyone can start a group. Once started, others can join (or un-join) with a mouse click. A group can be followed without joining — in fact without even signing up for Facebook (more on that below).

Here is a list of the groups I'm in, in no particular order:

- Old Tube Radios Group
- Begali Keys
- Amateur Radio Expeditions
- Ftdx10
- Silver Comet Amateur Radio Society
- Amateur Radio Meteor Scatter
- 1500 Watts and a Wire
- ARRL Field Day
- Yaesu Ftdx101D/MP & Ftdx10 Users Group
- Parks On the Air
- Vintage Amateur Radio Equipment (boat anchors)
- Potomac Valley Radio Club (PVRC) Amateur Radio Contesting
- CWOPS
- NFARL
- Begali Morse keys group
- 3830 Contest Scores
- Vintage Tube Radios
- The Heathkit Radio Club
- CW Bugs, Keys and Paddles
- Wire Antennas for Amateur Radio
- Friendly Amateur Radio Elmers
- Making Amplifiers for Amateur Radio
- FT8 Digital Mode Club
- Baluns, Ununs, Tuners and Filters
- Vintage Amateur Radio Stations
- Antique Radios, Restoration, Love and Repair
- Crystal Radio DX Group
- Ham Radio Information (News, Contesting, Dxing, Equipment...)

Around the Shack, Continued

- Amplifier Building and Home Brewing
- FISTS CW Club
- Ham Radio for Sale and Swap (Discussion)
- Raingutter Ham Radio Antennas
- Old Tube Radios Group
- DX News
- K9AY Telegraph
- Stealth Amateur Radio
- Team WX3B
- The Real Bakelite and Antique Radio Page
- The Spurious Emissions Band
- Random longwire antennas for ham radio
- Amateur Radio longwave DXing
- Heathkit Owners Group
- INDXA
- Real End Fed Half Wave Antennas
- Old and Vintage Radios
- SolderSmoke
- Amateur Radio Newsline
- Vacuum Tubes/Valves
- Heathkit Products
- Radio Telegraph Operators
- Straight Key Century Club

Well that's a surprise. I had no idea the list would be this long. This list of groups reflects my ham radio interests. You can tell I'm into CW and nostalgia.

Meanwhile, there are lots and lots of ham-related groups I've not joined. Examples include the groups for APRS, EMCOMM, various nets, various clubs, UHF/SHF, etc. Also, I pay attention to - but haven't joined - a few groups that are not ham-related. Two of those are the James Web Space Telescope group and the Hubble Telescope group.

My list of followed groups might seem daunting and time consuming. It's not. I average about 20 minutes a day on Facebook, mostly at night when my energy level is in decline. Some groups are active, others less so. I don't keep up with any of the groups I'm in. I don't read every post. I drop in when I feel like it.

My favorite groups include those discussing antennas, Heathkits, vintage gear and the Elmers group. I enjoy answering beginners' questions posted to the "Friendly Amateur Radio Elmering" group. There are lots of beginner questions there and lots of us who enjoy answering them. I've explained SWR at least a dozen times – that's okay. Besides being fun, making the hobby accessible and understandable is required to bring in newcomers.

Where do potential new hams hang out? On internet sites like Facebook.

I was first licensed in 1961, hence my nostalgia interest. Photos of two-tone gray and two-tone green Heathkit gear make me smile. I built a lot of those kits over the years. I built some EICO and some E.F. Johnson kits too. Two years ago I refurbished a DX-20, a DX-40 and a pair of VF-1s. My interest was renewed by Facebook.

Here are my thoughts on peoples' concerns. First, it's free and it's easy to create an account. There is no appreciable learning curve. I will ask you to take my word for that; but please know, also, that there are 3.1 billion Facebook accounts. That's 40% of the world's population. How hard can it be?

I have no security concerns. None. To open an account you create a login ID and password, create a screen name, and supply an email address. That's it. There is optional information you can enter, but don't enter it if you have concerns. Nobody can "find out your information" if you don't supply any. Facebook does not send mail to your personal email account — none. You can prevent others from seeing your email address by setting it to "private."

With the exception of what the companies and organizations post, you should run what you see on Facebook through your "internet filter." I have not seen wrong information intentionally posted to the ham-related groups, but I have seen occasional misinformation. Gray-area questions such as "is a quad better than a Yagi" will bring opinions, but that's no different than at a club meeting or a hamfest.

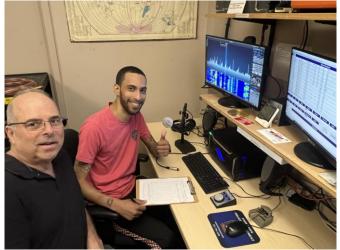
Try Facebook without creating an account. Go to www.facebook.com and look around. See if it's for you.

73,

Hal N4GG

Sunday Morning Breakfast Club





Steve WI2W with Eddie Diaz, new member learning how to make QSOs with the Flex 6400 at Position 1.

Come join us Sunday mornings 9-12, learn how to operate our top of the line stations, bring your favorite mug and make yourself a cup of coffee and socialize, bring a kit to build and use our fully equipped work stations or simply come by to say hi.

Sunday morning, July 7th Jim N2JLF brought a power supply from home that needed some work, and he used our workbench and vast assortment of tools and test equipment to work on it. A few others operated our HF station, making contacts and enjoying our high-end equipment. Others helped our Station Manager, Noel W2MSA, with some cleanup around the rooms. And all enjoyed coffee and bagels, thanks to Jim W2KNG!

This is a great opportunity for those members who cannot make the Tuesday and Friday evening meets to make use of the club facilities, meet other club members, get help and mentoring with operating or even fixing up equipment.

HAMSPEAK

SWR

Standing Wave Ratio is the measure of transmitted signal reflected back to the transmitter, caused by non-resonance of the antenna in use.

ANTENNA TUNER

A device used to present 50 OHM resistive impedance to the transmitter, to make up for antenna mismatch, using inductors and capacitors. This type of tuner has meters to tell you when your manual adjustments are correct.

AUTOMATIC ANTENNA TUNER

A tuner that does all the necessary calculations and adjustments internally, by itself, to match the antenna to the radio.

ANTENNA RESONANCE

An antenna is resonant when it matches the frequency being used and presents the least amount of reflected signal back to the transmitter.

CABLE LOSSES

Losses of signal dissipated as heat as the signal travels through the cable. Under extreme cases the cable may even get warm.

Fred Wawra W2ABE

A NOTE OF THANKS

I would like to express my thanks to the club for the unexpected recognition and award at the June business meeting. How thoughtful!

FLARC has long been a great club and continues to be so. I have been to lots of club meetings in various ham radio roles and the camaraderie of this club built around its clubhouse is unique. May it long continue.

Continued success and thanks again for the surprise and delight.

73 ES GL Fd WX2R



Theoretics Demystified

This time we will discuss how antennas work. The information following is old hat to experienced hams but is a good brush up and great information to the new ham or casual reader of this column.

SIZE MATTERS! Ever wonder why the radio bands are designated by their wavelength and not so much their frequency? The first thing that helps bring in a specific signal and actually broadly tunes it in is the antenna. The longer the WAVE LENGTH the bigger the antenna. Say if you want to be on 75 meters phone band, the ideal antenna would be 75 meters or about 200 feet long. Since practically no one can have an antenna that long, various things are done to make a shorter antenna look longer to the radio that is trying to receive or transmit on that frequency.

Antenna design using inductors to make the antenna electrically longer helps to make the antenna resonant, but this is also where an antenna tuner comes in, especially at 80/75 meters. To make an antenna efficient at a given frequency it needs to be resonant. This means that the antenna's electronic characteristics need to closely match the frequency that it will be receiving or transmitting on.

Using a tuner, this is done is by adding or subtracting capacitance and/or inductance to the antenna circuitry. On older antenna tuners this is done by making physical adjustments to the tuner's capacitance and inductance and this is determined by watching a meter which shows the amount of reflected signal that is coming back due to the mismatch of the antenna versus the desired match of the antenna to the frequency that the radio is tuned to.

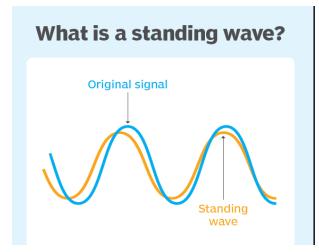
With modern automatic tuners this is done by the internal works, which do the calculations and work to find the lowest SWR (the ratio of reflected power back compared to that transmitted power). Low SWR is necessary to make transmission effective and to keep the reflected signal from damaging the radio's transmitting elements.

So, what happens when using a tuner? The main thing the tuner does is to keep the impedance, the AC resistance at the frequency that you are using, at 50 ohms impedance — which is the standard that transceivers want to 'see' during operation.

The standing waves that are generated by the reflected signal are reflected back and forth and dissipated as heat, which is very slight for the power levels that we hams are using. Any time signals are sent down a wire there are losses which we see as heat; just like when

water is sent through a garden hose there is a slight resistance to the water flow.

The closer the antenna is to the resonant frequency in question the less SWR and losses. SWR stands for standing wave ratio.



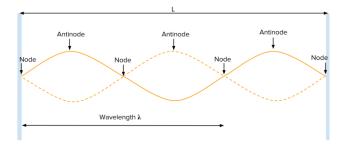
Think of taking a rope and attaching one end to a stationary object and shaking the rope. When the movement hits the non-moveable end the movement is returned back to the person shaking the rope. The returned motion of the rope, or in the case of a transmitting antenna the reflected power back, is the standing wave.

The amount of power going out versus the reflected power is the Standing Wave Ratio. On 80 meters and lower frequencies, the waves are so long that only a small portion of the band can be tuned at any given time.

When I am operating on 80/75 meters, I need to retune for each portion of the band that I am transmitting on. The tuner is designed so that the radio 'sees' 50 ohms impedance since that is what it is designed to work with.

Antenna design is a science and an art. There is much more that can be explored.

Fred Wawra W2ABE



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FLARC PortableOps SIG

PortableOps@FairLawnARC.groups.io

This is a Special Interest Group (SIG) for members interested in portable ham radio operation such as POTA, SOTA, IOTA, LOTA, etc.

The purpose of this SIG is to get outdoors and practice our operating skills from different places. We can share outing experiences, tips and work on our operating skills.

Gene Ottheimer WO2W on June 01, 2024 activated NJ parks US-1631 [Stephens State Park], and US-0888 [Musconetcong River National Wild and Scenic River]. Gene has now earned his "Bronze 10-park activator" award from POTA.

A nameless friend stated that Gene is now contemplating his 5-park "Rover" award, but this will have to wait until the sun stops having a geomagnetic conniption fit.

As a reminder, many state parks will be charging an entrance fee starting July 01, 2024. Example: Round Valley (US-7505) will charge a \$5 entrance fee during the week and \$10 on weekends.

Bill Leger WA2WL



Gene WO2W setting up his portable POTA station



DX Special Interest Group Update





James KB2FMH & Vlad OK2WX, members of the Mediterranean DX Club at FHN / Ham Radio 24 in Friedrichshafen, Germany. Both are also operator team members of the coming expedition to Burkina Faso as XT2MD in November 2024.



My trip to Ham Radio 24 in Germany, June 27 to 29, 2024

After speaking at Hamcation, Hamvention and the DX Convention in Visala I was asked if I'd give a talk on POTA at the Ham Radio Expo in Friedrichshafen, Germany and of course, I agreed. It seems that no one in Europe knows much about the program as all the administrators are in the US. The seminar was titled POTA for European Operators, and it drew a group of about 150 people from all over EU and even the Middle East.



I spent most of my time at the Expo in what is called the DX Alley where all the DX Clubs have their respective booths. As a member of most all except the Japanese club, I chatted my way along the Alley where I met my friend Charles M00XO, of QSL manager fame, in person for the first time.

While there I also took part in the IOTA 60th Anniversary dinner (at the Zepplin Museum) which happened to be the same day as my own birthday - so anniversary host and friend, IOTA director Cezar VE3LYC decided we'd celebrate together with a big German Chocolate Cake!

Another nice experience was the Bavarian Contest Club Dinner where I met many of the world's top contesters and DXers. I also happened to be recognized by the POTA mapping rep for Romania, Mihai Y06SM and his daughter Y06YLJ, both at the dinner, and another chance encounter with Amir 4X6TT who was the close friend of JY1, the King of Jordan, who was an avid Ham and Drake Radio collector like me -- which we discussed for some time, recalling how we'd talked on 15 meters back in the late '80s with our Drakes.

Many of the DXpedition crowd asked about partnering with POTA since the latest expeditions to Swains, Juan Fernandez and Glorioso were part of it -- as well as the coming N5J and CY9S. I was given the log from JW0W

and promised the logs from the Yemen DXpeditions to Socotra Island earlier in the year.

While most attendees left Sunday afternoon and evening, I stayed till Monday afternoon to unwind and see some sights on the waterfront of Lake Constance, separating Germany from Switzerland (I traveled via Zurich Airport and took a Ferry across the lake to Friedrichshafen).

While having some late-night coffee outside the hotel on Sunday I was met by two remaining Hams from Kuwait who'd been at the POTA seminar Saturday afternoon. They were very interested in getting the program moving in their country, citing a half dozen parks that are eligible for inclusion. Happy to oblige them, I assigned one, Ahmed 9K2DB as the country mapping representative and connected him to our global mapping manager David KK40MJ for the onboarding training. It seems I cannot hide anywhere, even in Europe, thanks to Parks on the Air!

Overall, it was a great experience, allowing me to meet many of my On-Air friends and make many new ones. It was also my first venture to Europe which, despite having been in all four hemispheres, was an amazing adventure. The Zurich Airport has our US airports beat by miles and they are the friendliest people you'll meet. I am excited to return in 2025. James KB2FMH



3Y0K / Peter 1 team members Adrian KO8SA, James KB2FMH, Ken LA7GIA with friends Martin LA3MHA & Lars LB2TB at dinner on the lake.







James KB2FMH & Jamie M0SDV at Zurich Airport

James KB2FMH and Charles M0OXO at IOTA booth



The Westchester Emergency Communications Association Box 831 Sleepy Hollow, NY 10591 www.weca.org

Entry Level Ham Radio License Class This Fall!

2024 In-Person and Zoom Classes start Tuesday evening, September 11th

Have you ever thought about becoming an Amateur Radio "Ham" operator? Here is a great opportunity to learn about Ham radio and to study for your FCC license with seasoned Ham radio operators as your teachers and mentors!

The Westchester Emergency Communications Association (WECA: www.weca.org) is proud to sponsor a free Technician Class License course, in-person at the Westchester Fire Training Center, 4 Dana Road, Valhalla, NY 10595** and also on Zoom. Take your first steps and join the exciting world of Amateur Radio. Enjoy talking to other Amateur Radio Operators, near and far! Want to experiment with new technologies that utilize computers interfaced with radios? Would you like to join forces with county government and local volunteer organizations as Amateur Radio Operators for Emergency Communications assistance and Public Service events? Take your first steps by joining us for this interactive course taught by a team of knowledgeable Amateur Radio Operators with a passion for their subjects.

You can get an Amateur Radio Technician FCC license by passing a 35-question multiple-choice examination. No Morse code test is required! The exam covers basic regulations, operating practices, and electronics theory, with a focus on VHF and UHF communications.

All information needed to pass the test will be covered in this course.

The required text is the "ARRL Ham Radio License Manual 5th Edition". The book includes all questions in the test pool and access to on-line practice tests. An accompanying text, "ARRL's Tech Q&A 8th Edition" may be helpful, but is not necessary. These are available from:

- ARRL, https://home.arrl.org/action/Store/Product-Details/productId/2003373064 860-594-0200
- Gene, KJI Electronics, Cedar Grove, NJ, Call or text him at 973-571-1930
- Amazon, www.amazon.com Be sure to order the correct editions.

Please obtain the license manual and begin reading.

Classes will start on Tuesday evening, September 11th and run for nine weeks mostly on Tuesday evenings from 7-9:15 PM ET. FCC license testing is available at various locations (typically \$15 test fee). If you or someone you know would like to become an FCC licensed Radio Amateur, please contact me by email at Education@WECA.org so I can register you and provide additional information. All are welcome to attend who wish to gain knowledge of amateur radio even if you do not expect to take the test. Licensed amateurs who would like to brush up on the subjects covered are also welcome.

Larrie Sutliff W2UL

WECA Education Director

** Classroom students: We enter the Fire Training Center through the rear door (the front door is typically locked/no parking). From Route 9A, with the Hawthorne Home Depot at your back, proceed East on Dana Road about 2/10 of a mile, past 4 Dana Road, and turn right on Walker Road. Park in the long lot on the right and go down the outdoor stairway, pass the trailer, turn right (twice) and enter through the outside door for Classroom #3.

Handicapped access is available at the training level- just park in front and use the security phone or call me on 732-693-4504.

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ELECTRONIC DUES PAYMENTS ARE NOW AVAILABLE!



FLARC dues, new and renewal — and even donations! — can now be made on-line ...

Until permanent arrangements can be made, several fiduciaries of the Fair Lawn Amateur Radio Club have graciously agreed to forward electronic payments to the Club's bank account. Payments can be made using either PayPal or Zelle account.





- Log into your PayPal account
- Locate the Send Money function
- Use the following email address as the recipient: 1947xyzabc1947@gmail.com
- Enter the appropriate \$ amount for your dues
- In the notes section, include your Call Sign and what year(s) the dues are for
- When prompted, indicate that you are "Sending to a friend"

- Log into your Zelle account
 - Use the following phone number as the recipient: 201-240-9317
- In the notes section, include your Call Sign and what year(s) the dues are for

Once complete, you may – for added assurance - send a screenshot to treasurer@FairLawnARC.org

please be sure to redact any personal information –
 (e.g. bank account number, balance, etc.)

For both new and renewal, please complete the Membership Application form at https://FairLawnARC.com/membership.pdf

with your current info and either give it to a club officer or mail it to the address on the form.

For additional information on club membership, visit http://membership.FairLawnARC.org

Visit the club website at http://FairLawnARC.org for info about the club, club activities, club history and our club 2-meter repeater.

For a PDF form that can be filled in on-line, then printed and mailed with check, CLICK HERE

Or you can print this page, fill it in and mail to the address shown at the bottom.



Fair Lawn Amateur Radio Club

Fair Lawn Recreation and Community Center 10-10 20th Street Fair Lawn, N.J. 07410

MEMBERSHIP/RENEWAL FORM

Name				Cal	l	
Address				Ste./Ap		
City			State		Zip	
Roster Published Phon	e #					
Roster Published EMA	JIL			License c	lass:	
and the second s	Member?		ember?	ARES Member ?	CERT?	VE?
Additional Family	Members (In sa	me household				
Name					Call	
Name					_ Call	
Introductory and S (Students under the (Introductory me or not a member	ole for student m	embership)	\$ 20	s		
Associate Members	ship *			(No Fee)		
* Open to Fair Lav	wn Residents On	ly. No voting rigl	its or other privi	lleges.		
Renewal of Curren	t Membership			\$ 25	S	
Three Year Renewa	al Incentive			\$ 65	S	
(Single membersh	ips only, family	nemberships exc	luded)			
Additional Family	Members	# at		S 5 each	<u>s</u>	
Life Membership				\$ 625	s	
Senior Life Membe	ership (65 yrs.	of age or over)		\$ 250	S	
Equipment Fund D	regular meml	ership dues		s		
			To	otal submitted	s	
				Da	ate	

I hereby acknowledge the By laws and rules and regulations of the club and will abide by them as amended

 $Please\ Note:\ Memberships\ are\ NOT\ Pro-Rated.\ Membership\ is\ from\ Jan\ 1^{\$t}\ to\ Dec.\ 31^{\$t}\ of\ any\ given\ year\ unless\ documented\ otherwise.$

Please make your dues check payable to the "Fair Lawn Amateur Radio Club" and remit to the following address:

Fair Lawn ARC

– Attn: Treasurer

10-10 20th Street

Fair Lawn, NJ 07410

Complete this form for NEW or RENEWAL ARRL membership and give to FLARC Treasurer [David Gotlib KD2MOB] with your payment check.



ARRL Affiliated Club Membership Application

☐ I am a brand-new member, or my membership lapsed for 2 or more years. My club will receive a \$15 commission.							
☐ I am renewing (includes lapsed members of less than 2 years). My club will receive a \$5.00 commission.							
Name	Call Sign						
Address							
					tate ZIP		
Email					Phone		
Date of Birth	/						
☐ My Fami	ly Member is Joir	ning or Rei	newing: (A	Annually §	10 per member)		
Name							
Your Annual Membership Dues - Circle Your Choice Check One Check One							
US Members	shin	3 Years \$140	2 Years \$95	1 Year \$49	□ QST, ARRL's membership journal for active radio amateurs (12 monthly)		
	al (Digital Only)	\$140	\$95	\$49	issues)		
Internationa	al (with mailed QST)	\$217	\$147	\$76	☐ <i>On the Air,</i> Beginner-to-intermediate-		
Blind		\$30	\$20	\$10	level help and advice (6 bimonthly issues)		
Family		\$30	\$20	\$10	☐ Digital Only (All members can access		
Student				\$25	the digital versions of both magazines)		
	TOTAL \$						
Payment	Enclosed is my:	☐ Check	□ Mone	y Order	☐ Charge Request		
	Charge to my:	□ Visa	□ Maste	ercard	□ Amex □ Discover		
	Card Number				Expiration Date		

Toll Free (US) 1-888-277-5289 or 860-594-0200 • ARRL, 225 Main St., Newington, CT 06111-1400 membership@arrl.org • www.arrl.org/join

July 2024 FLARC Business Meeting

FAIR LAWN AMATEUR RADIO CLUB MINUTES BUSINESS MEETING Fair Lawn Senior Center July 12, 2024

The Club's President Fred KR2H called the meeting to order at 7:30 PM. At his request the members present in person rose and recited the Pledge of Allegiance.

The President then asked the Club Secretary Jim W2KNG to call the role. The Secretary called the following:

President,	Fred	KR2H	Present
Vice Preside	nt Robert	KD2SOG	Present
Treasurer,	Dave	KD2MOB	Present
Secretary,	Jim	W2KNG	Present
Trustee,	Van	W2DLT	Present (by Zoom)
Trustee,	Brian	KD2KLN	Present
Trustee,	Judith	KC2LTM	Not Present

The Secretary confirmed to the President that a quorum existed in order for the meeting to proceed and business conducted.

The President then asked for a motion to approve the minutes of the meeting held June 7, 2024. Upon motion made by Nomar NP4H and seconded by Jim W2KNG the minutes were unanimously approved as published in the June 2024 Resonator.

The President then asked the Treasurer, Dave KD2MOB to give the Treasure's Report. Dave gave the various account balances. He then stated that the Club had budgeted \$600 for Field Day and the final number was \$605, so that was very good. He also reported that at the moment there are 139 fully paid members. He also thanked all who participated in Field Day for a successful event. Upon motion duly made by Nomar NP4H and seconded by Fred KR2H the Treasurer's Report was unanimously approved.

Noel W2MSA then gave the Tech Committee Report. He stated that the coffee station is up and running. He reported that Fred W2ABE is recommending upgrading the batteries in the UPSs to Bioenno batteries. Noel also stated that he had inventoried 26 important Club equipment items, especially radios and related equipment, and cataloged all with serial numbers and similar identification. He further reported that arrangements have been made to pick up the SkyHawk tribander and 12/17-meter Yagis. In addition the Tech Committee is investigating getting quotes from tower climbers to perform the swap of the Yagis and investigate/repair rotor binding.

He cautioned members to please do not make any hardware or software changes to any operator position at the Club without his approval as Station Manager. Specifically, do not change logging settings at Position 2, the FT8 station, as this is maintained by Jim W2JC. Jim W2JC noted that at Positions 1, 2 and 4 there are step by step instructions on how to start and end use of the station, and these instructions should be adhered to. Any unclear instructions should be reported to Jim W2JC for clarification.

July 2024

FLARC Business Meeting, cont'd.

Moving on to Field Day, Noel reported that all radios performed well. Higher bands propagation was poor. Next year, WO2X is recommending we have CAT 5 cable between CW and SSB tents. This led to some discussion concerning the efficacy of running that much cable across the Field Day site, and the matter will be reviewed next year. This also led to a fulsome discussion concerning the antenna placement and set up. There were some significant "in the field" antenna adjustments and swapping antennas. This led to a rather lengthy discussion on the types of antennas which should be used, including simple dipoles and delta loops. However in the end it was left that all this will be reviewed and worked out next year. Finally Noel noted that the 6 meter Yagi antenna with military mast worked well. Noel thanked everyone who participated in Field Day.

The President then asked Jim W2JC about the status of the Field Day logs and he reported that everything was done except the bonus points need to be added in.

Noel W2MSA then noted that there had been an email circulated about the lack of cleaning up at the Clubhouse, especially with respect to the coffee station. The point was made that members should make sure everything is cleaned up and put away before leaving the Clubhouse.

The President then asked Robert KD2SOG to report on the Youth Outreach Committee. He reported that school is out for the summer so not much is happening. He did note that some young people did stop by on Field Day and Jim W2JC ran a presentation on the Paterson Falls event for them. The point was also made that young people come to the Rec Center often and the Clubhouse could be a bit isolated from where they are. Perhaps signs or posters could be set up directing young people to the Clubhouse asking them come and see what ham radio is all about. The point was made that the Club needs to be prepared for drop-ins and should have presentations ready as well as ARRL material about ham radio handy. Perhaps also some literature on the table near the Rec Center office.

The President then asked for a report from the Adult Outreach Committee from Van W2DLT. Van replied that he was waiting for a list of inactive members to begin to focus on them. This led to a very long discussion on ideas on how to reach seniors citizens at Senior Center, since that is where Fair Lawn seniors come together. Various ideas were tossed around about ways to reach seniors and how to interest them in ham radio. This expanded to ideas of reaching out to other places seniors come together such as VFW halls. The discussion was lengthy with various ideas bandied about. Nothing definitive was decided by the ideas discussed, but it was felt that these ideas can form the basis of action items in the future.

Robert KD2SOG then read the YouTube report. There are 1,400 subscribers. Last month there were 1,400 views with a watch time of 216.7 hours. Top videos were Kent Britain WA5VJB on "All You Need to Know About Yagi Antennas" and after that the Walter Cronkite presentation.

Dave KD2MOB reminded the members that the Fair Lawn 100th anniversary celebration was coming up with festivities on September 22. The Club has already decided to be a part of that affair. He noted that perhaps the Club could set up a demonstration station at a public place and repeat the kind of things done at the Paterson Falls event. Jim W2JC noted that the Club would need a hook to draw people in and that members should be available on the repeater to demonstrate ham radio contacts, or perhaps find a net that people would be interested in listening to. For example, unlike a cell phone call, on a net everyone can hear what everyone else is saying and that might have appeal to many people.

July 2024 FLARC Business Meeting, cont'd.

Dave KD2MOB then gave the RACES/ARES report. He noted a change to the net schedule. The Northern New Jersey ARES net meets on the WS2Q repeater on the 2nd Tuesday of every month. The Northeastern New Jersey ARES net meets on the 1st and 3rd Wednesday of every month on the Metroplex Repeater. The Fair Lawn ARES net meets on the 2nd and 4th (and if there is a 5th) Wednesday of every month at 8:00pm on the W2NPT repeater. Jim W2JC reminded the members that the EmComm SIG calendar has all these nets listed on the calendar. Dave also added that Jim N2JLF will run an EmComm training session at the Fairfield NJ Red Cross facility on September 14 at 9:30 AM.

Gene WO2W reported that at the last VE Session there were three candidates and all were successful. At the moment there is only one candidate for the next VE Session. He also noted that on July 1 a new booklet of questions and answers for the Amateur Extra exam was circulated. He also briefly reported on the Hamfest and said everything was under control at the moment. The dates are September 7 with a rain date of September 21. He also noted that the Fair Lawn CERT is not active as the Fair Lawn OEM has little interest in ARES or RACES.

The President then returned to the Fair Lawn 100th Anniversary celebration and asked if the Club could secure two Special Event call signs, such as perhaps something like K2F and K2L. This would be active for one week beginning September 22 and ending September 29. The club could perhaps offer a certificate for working the special event stations. Jim W2JC offered to try to obtain those calls and work with James KB2FMH on designing an appropriate digital certificate.

The President asked all SIG Chairs to please send SIG information to The Resonator for publication. He also noted that the Club had received a donation of an FT901DM. He suggested it be offered for sale at the hamfest and it should sell for between \$350 and \$500. He noted it does work. However, if a club member is interested in this equipment they should contact Gene WO2W prior to the hamfest.

Jim W2JC noted that Dave N2AAM has offered to head the Satellite SIG. However the Digital Voice, Raspberry Pi and Direction Finding SIGs have no leader at the moment and asked any member of those groups to consider becoming the head of the SIG.

There being no further business, on motion made by Nomar NP4H and seconded by Brian KD2KLN, the meeting was adjourned at 8:45pm.

Respectfully submitted

James P Jalil, Secretary W2KNG

